CATEGORY: Runoff Management

USE GROUP: Temporary

WATER DIVERSIONS

ISSUED: 10-1-2008

DEFINITION AND PURPOSE:

Water diversions consist of a system of structures and measures that intercept clear surface water runoff upstream of a project site, transport it around the work area, and discharge it downstream with minimal water quality degradation for either the project construction operations or the construction of the diversion.

APPROPRIATE APPLICATIONS:

A water diversion is typically implemented **where appropriate permits have been secured** and work must be performed in a live stream or water body. Water diversions are appropriate for isolating construction activities occurring within or near a water body such as streambank stabilization, or culvert, bridge, pier or abutment installation. They also may be used in combination with other methods, such as water bypasses and/or pumps. Pumped diversions are suitable for intermittent and low flow streams. Excavation of a temporary bypass channel, or passing the flow through a pipe is appropriate for the diversion of streams less than 20 feet wide, with flow rates less than 99 cubic feet/second.

CONDITIONS FOR EFFECTIVE USE:

Type of Flow: Concentrated flow.

Capacity of Device: Sized for 2 year rainfall intensity event.

Pumped stream diversion for bridge installation.

WHEN BMP IS TO BE INSTALLED:

Prior to work being done in or adjacent to a water body.

STANDARDS AND SPECIFICATIONS:

Site conditions will dictate the design. Generally, excavate diversion area except for area of upstream connection. Install pipe bedding or channel lining as required. Install pipe and backfill to required dimensions. Install additional BMPs as designed-both in the diversion and downstream. Make the final connection to upstream storm sewer system.

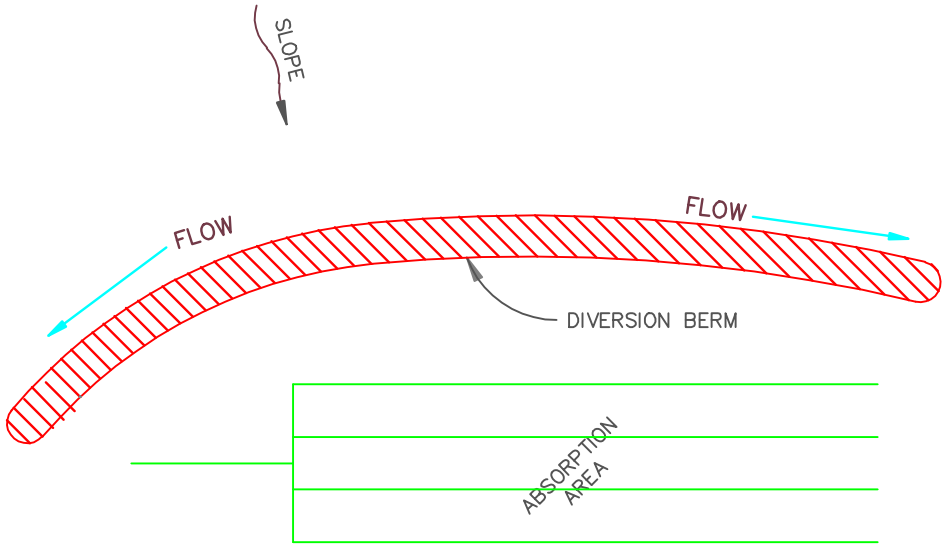
OPERATION AND MAINTENANCE PROCEDURES:

Inspect at least once per seven calendar days, or within a reasonable time period (not to exceed 48 hours) of a rainfall event which causes stormwater runoff to occur on-site. Remove debris and sediment. Repair eroded areas and stabilize-a wider channel, bigger pipe, or additional stabilization may need to be designed.

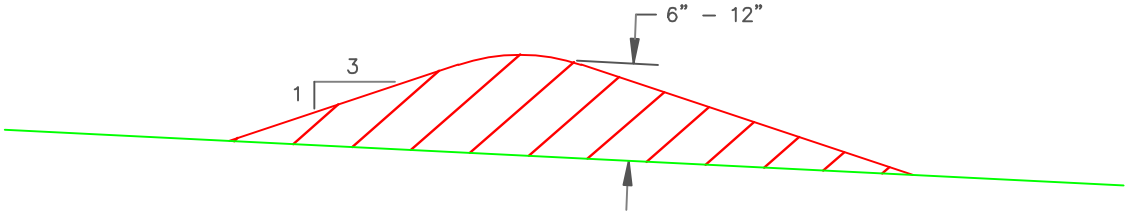
SITE CONDITIONS FOR REMOVAL:

Remove the water diversion when work in or adjacent to the water body has ceased.

TYPICAL DETAILS: RM-3.1, RM-3.2, and RM-3.3



PLAN



THE AREA WHERE THE BERM IS CONSTRUCTED SHALL BE STRIPPED OF VEGETATION PRIOR TO PLACING FILL FOR THE BERM. FILL SHALL BE A GOOD QUALITY TOPSOIL REASONABLY FREE OF STONES, ROOTS AND OTHER DEBRIS.

ELEVATION

Modified From Greene County Missouri – Storm Water Design Standards

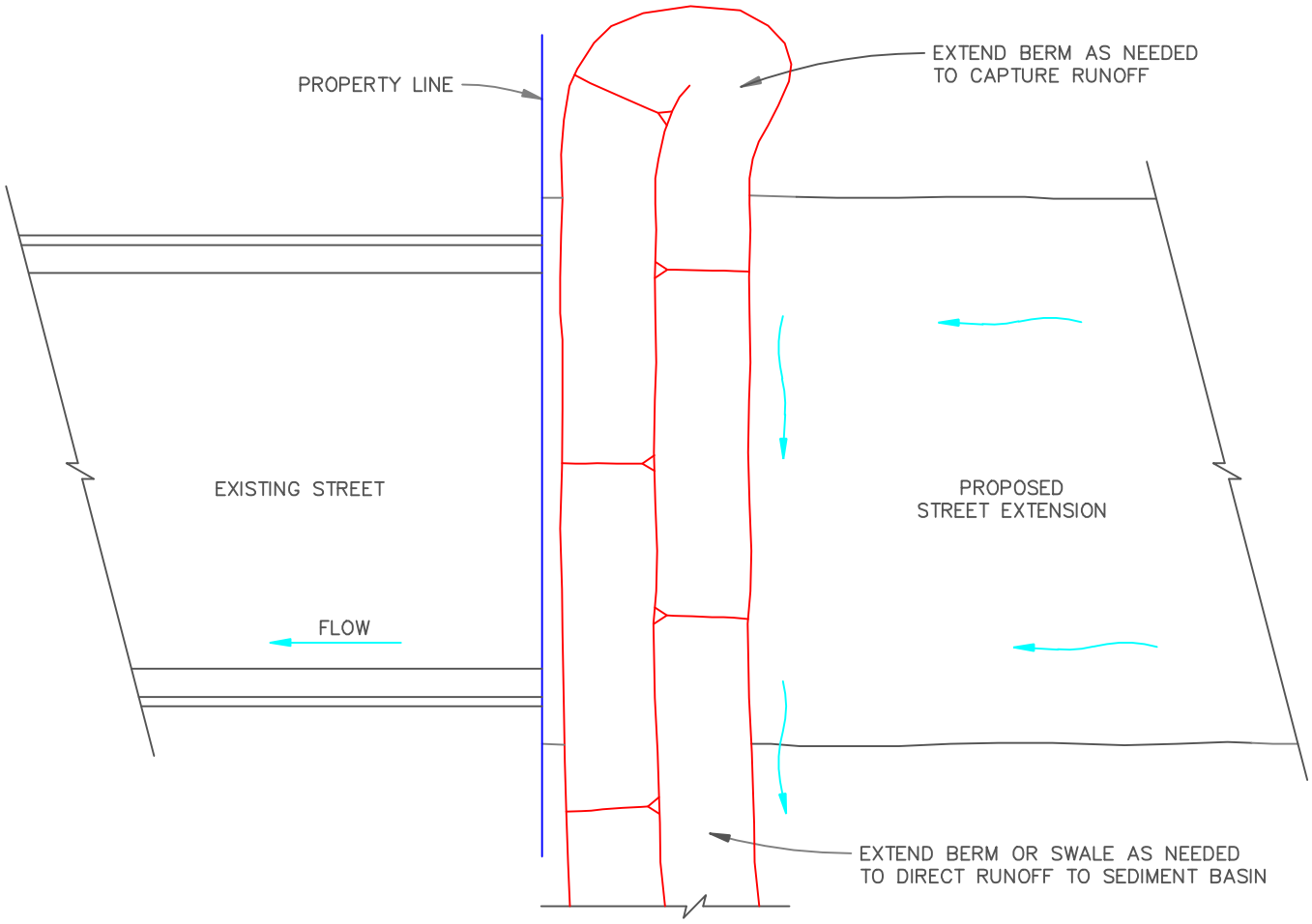
NTS

City of Springfield, Missouri

Department of Public Works
Storm Water Services Division

TYPICAL DIVERSION BERM

Figure: RM–3.1
Issued: 10–01–2008
Revised:



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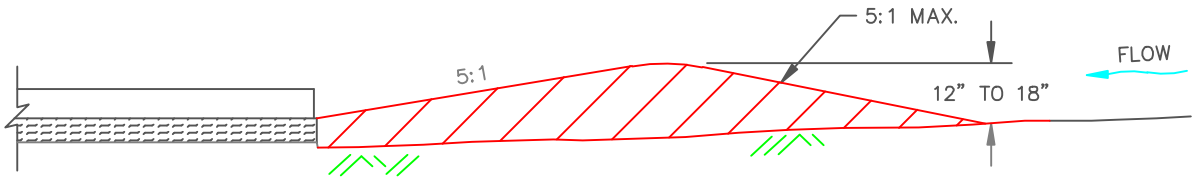

CROSS–SECTION

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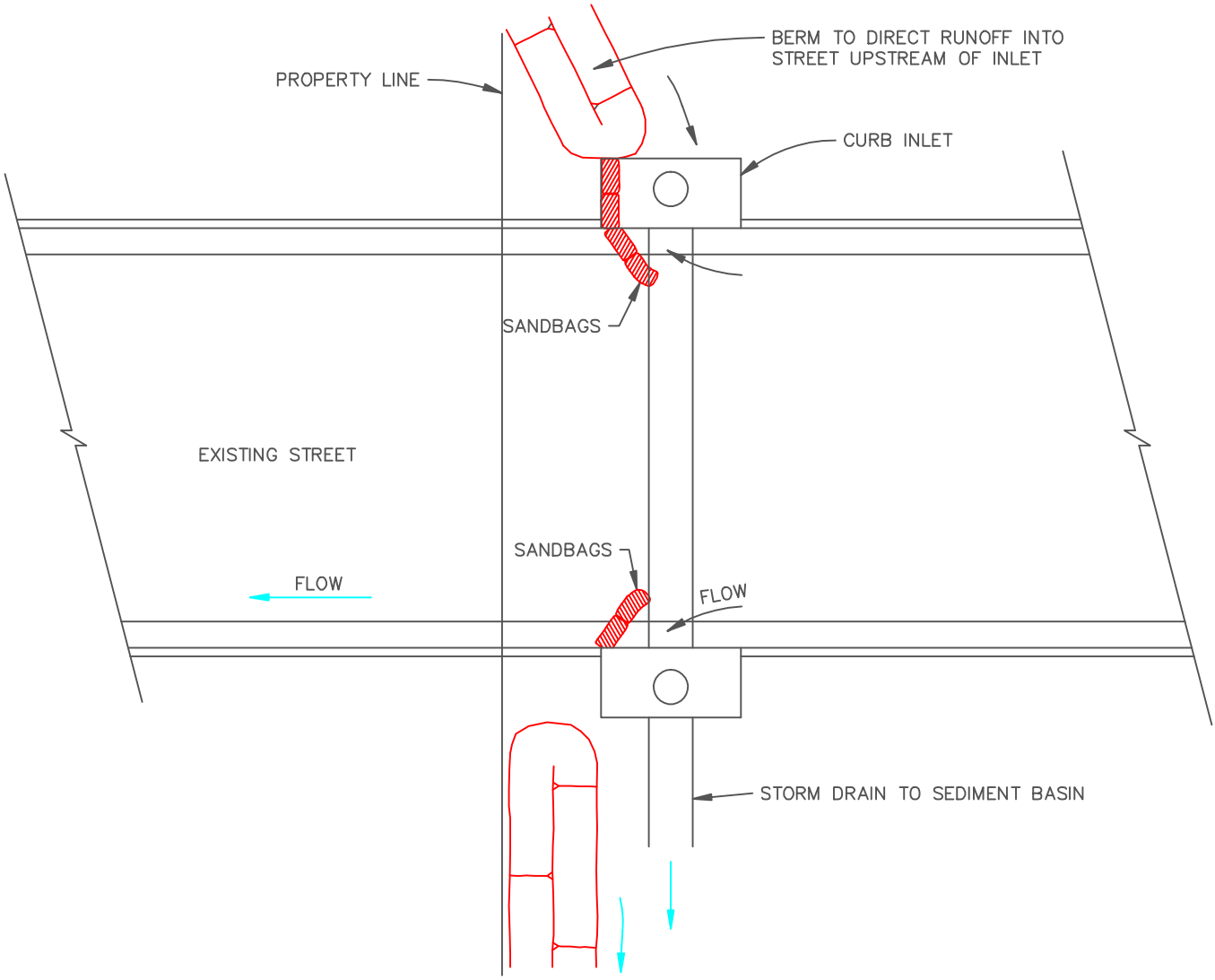
Storm Water Services Division

DIVERSION OF RUNOFF FOR CURBED STREET
CASE 1 – BEFORE PAVEMENT AND INLET COMPLETED

Figure: RM–3.2
Issued: 10–01–2008
Revised:



NOTE: FILL SANDBAGS WITH CHAT OR LIMESTONE SAND

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NTS

City of Springfield, Missouri

Department of Public Works
Storm Water Services Division

DIVERSION OF RUNOFF FOR CURBED STREET

CASE 2 – AFTER PAVEMENT AND INLETS COMPLETED

Figure: RM–3.3
Issued: 10–01–2008
Revised: